UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,729	07/10/2003	Daniel Raymond Pyles	J6723(C)	2755

201 7590 05/24/2005

UNILEVER INTELLECTUAL PROPERTY GROUP
700 SYLVAN AVENUE,
BLDG C2 SOUTH
ENGLEWOOD CLIFFS, NJ 07632-3100

EXAMINER	
VANIK, DAVID L	
ART UNIT	**PAPER NUMBER**
1615	

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/616,729	PYLES, DANIEL RAYMOND	
	Examiner	Art Unit	
	David L. Vanik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-21* is/are pending in the application.

4a) Of the above claim(s) *5,6,12 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4,7-11 and 14-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of Applicant's response to the Election/Restriction requirement filed on 2/28/2005.

Election/Restrictions

Applicant's election with traverse of Claims 1-11 and 14-21 in the reply filed on 2/28/2005 is acknowledged. The traversal is on the ground(s) that examining a method of treating hair together with a kit comprising a dye impregnated hair-covering composition does not present the examiner with a search burden. This is not found persuasive because claims 1-11, 14-21 and claims 17-21 differ in scope as indicated by their distinct modes of operation. Kits provide a convenient mechanism of dispersing products to consumers. On the other hand, the instant method of treating hair encompasses steps of using a product, not dispersing a product to consumers. As such, claims 12-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and invention, there being no allowable generic or linking claim. The examiner also notes that applicant has canceled the instant claims 1 and 5.

In view of applicant's response to the election/restriction requirement, the examiner has decided remove the election requirement for both the "thermochromatic mutable dyes" group (a) as well as the "mutable dyes" group (b). However, the election requirement concerning the "fabric material" group is maintained. Claim 6 is hereby withdrawn as being drawn to a non-elected species. Applicant timely traversed the

restriction (election) requirement in the reply filed on 2/28/2005. The requirement is still deemed proper and is therefore made FINAL.

Specification

The disclosure is objected to because of the following informalities: The application does not include a figure legend for Figure 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 19 is drawn to a list of mutable dyes suitable for use in the instant invention. While the examiner acknowledges that the instant specification contains lists of various thermochromatic materials on pages 7-10, the specific mutable dyes listed in claim 19 are not enumerated in the instant specification. As such, the disclosure of the instant specification is not sufficient to support the specific list of mutable dyes as set forth claim 19.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-4, 7-11, 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Application 2002/0110583 ('583) in view of US patent 5,606,983 ('983) and further in view of 4,421,560 ('560).

'583 teach a woven fabric hair cap sorbed or impregnated with a hair-conditioning agent (abstract and paragraph 0008). The conditioner impregnated cap can be applied to the hair and secured with hook and loop closures (paragraph 008). The hair conditioner can be heat controlled and can be activated by either the body's natural heat or by an external heating source, such as a blow dryer (paragraph 0011). According to '583, the hair cap is woven and, like the instant claim 7, the fabric can comprise a polyester material (paragraph 0008). The polyester fabric is also "dry to the touch" (Claim 12). Since, like the instant application, the fabric material used by '583 is

polyester and the conditioner can be activated by a blow dryer, it is presumed that the Tg of the fabric is "higher than any transferable by a blow dryer appliance."

'583 does not teach a method of treating hair comprising a mutable dye indicator.

'983 teach a heat-activated hair-curling device comprising a thermochromatic dye component (abstract). Said thermochromatic dye component acts as an indicator, changing colors when the temperature is within a suitable range (Claim 1, abstract, column 4, lines 36-39). The hair curler can comprise two separate thermochromatic dye layers, one that changes colors when the temperature is within a suitable range and another that changes colors when the temperature is outside of the range (Claims 1).

According to '983, it is advantageous to have a thermochromatic color change indicator associated with hair curlers because the color change mechanism indicates to the individual that the process is "complete" (column 3, lines 48-52). This helps to ensure the best hair treatment results (column 1, lines 29-32). Because thermochromatic dye indicators are effective tools, signaling when a heat-based application is complete, one of ordinary skill in the art would have been motivated to use thermochromatic dye indicators in the conditioner impregnated cap as advanced by '583. Based on the combined teachings of '983 and '583, there is a reasonable expectation that thermochromatic dye indicators, attached to a conditioner impregnated hair cap, would act as an effective hair treating device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use

thermochromatic dye compounds, as taught by '983, as an indicator in the conditioner impregnated hair cap as set forth by '583.

Neither '583 nor '983 teach specific thermochromatic dyes.

'560 teach reversible thermochromatic materials (abstract). One such thermochromatic material, 3-Diethylamino-7,8-benzofluoran, can undergo a color change from colorless to "red pink" at 46°C (column 16, line 52 and Table 1). As such, 3-Diethylamino-7,8-benzofluoran is a suitable thermochromatic material. Because, as confirmed by '560, 3-Diethylamino-7,8-benzofluoran is an effective thermochromatic material, one of ordinary skill in the art would have been motivated to use 3-Diethylamino-7,8-benzofluoran as a thermochromatic material in the invention proposed by '983. Based on the combined teachings of '983 and '560, there is a reasonable expectation that 3-Diethylamino-7,8-benzofluoran would be an effective thermochromatic material, thus useful as an indicator in the conditioner impregnated hair cap advanced by '583. As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use 3-Diethylamino-7,8-benzofluoran as a thermochromatic material in the invention proposed by '983.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Vanik whose telephone number is (571) 272-3104. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carlos Azpuru, can be reached at (571) 272-0588. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Vanik, Ph.D.
Art Unit 1615

5/19/08

CARLOS A. AZPURU
PRIMARY EXAMINER
GROUP 1500